APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/774,721	02/01/2001	Song-Bor Chen	3313-0275P-SP	3385

7590 01/16/2004	EXAMINER
BIRCH, STEWART, KOLASCH & BIRCH, LLP	SHRADER, LAWRENCE J
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ART UNIT	PAPER NUMBER
2124	

Falls Church, VA   22040-0747

DATE MAILED: 01/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/774,721	CHEN, SONG-BOR
	Examiner	Art Unit	
	Lawrence Shrader	2124	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _01 February 2001_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-4_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-4_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

    a)☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)   4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5)☐ Notice of Informal Patent Application (PTO-152)

3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .   6)☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 1 – 3 are rejected under 35 U.S.C. 102(b) as being anticipated by J. B. Rosenberg,

"How Debuggers Work" (hereinafter referred to as Rosenberg).

It is assumed that an error output command in the POST is equivalent to a breakpoint in

any other program command sequence, because *The Microsoft Computer Dictionary*, Fifth

Edition defines a breakpoint as being implemented by inserting at a point some kind of jump,

call or trap instruction that transfers control to a debugger so that a program's status or variables

might be examined.

In regard to claim 1:

> *"the step of inserting an error output command, which inserts an error output command after any hardware device test or initialization step in the sub-routine of the POST program so as to output a particular value to a debug port after the hardware device test or initialization step;"*

Rosenberg discloses that breakpoints are inserted (page 107 last sentence) allowing a user

to examine various variables or conditions.

"the step of enabling the error output command, which inserts a condition before the error output command so that the error output command is enabled to output the particular to the debug port when the condition holds."

Rosenberg discloses conditional breakpoints that may be inserted (p. 108 last para. to p. 109 first para.), which causes a stop when a particular value is found, allowing a variable to be examined.

In regard to claim 2, incorporating the rejection of claim 1:

"...wherein the validity of the condition is determined by setting a particular variable and detecting the value of the particular variable."

Rosenberg discloses the detection of a variable value (p. 30, second paragraph).

In regard to claim 3, incorporating the rejection of claim 2:

"...further comprising the step of setting the particular variable."

The variables in any other software system would have to be set as the program is run.

Therefore, a variable would have to contain an inherent value that is set as Rosenberg discloses at p. 30, para. 2.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over J. B. Rosenberg,

"How Debuggers Work" in view of Andrews et al., U. S. Patent 6,317,871 (hereinafter referred

to as Andrews).

In regard to claim 4, incorporating the rejection of claim 1:

> *"...wherein the error output command is compiled and added into the POST program*
> *only when the condition holds."*

Rosenberg discloses that breakpoints (error output commands) are inserted allowing a

user to examine various variables or conditions, but does not disclose a conditional compilation.

However, Andrews discloses a conditional compilation wherein statements are only compiled

into the final program if the condition is true (column 2, lines 4 – 9). Therefore, it would have

been obvious to one skilled in the art at the time the invention was made to combine the use of

error output commands as taught by Rosenberg with the conditional compiling disclosed by

Andrews, because the conditional compiling feature permits the proper debugging commands to

be inserted while compiling only a specific section of code in order to debug the system as

taught by Andrews at column 2, lines 6 – 9.

Conclusion

5.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure:

U.S. Patent 5,850,562 to Crump et al., regarding debugging of POST and BIOS code.

U.S. Patent 6,336,195 to Shen et al., regarding debugging of BIOS code.

6.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Lawrence Shrader whose telephone number is (703) 305-8046.

The examiner can normally be reached on M-F 08:00-16:30.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kakali Chaki can be reached on (703) 305-9662. The fax phone number for the

organization where this application or proceeding is assigned is (703) 746-7239.

        Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-3900.

Lawrence Shrader
Examiner
Art Unit 2124

January 9, 2004

KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100